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## The faculty of restoration, university of pardubice – national heritage in specialists' hands

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### Abstract

The paper deals with the introduction of the Faculty of Restoration, the smallest faculty of the seven faculties belonging to the University of Pardubice. The Faculty offers four study courses on Bachelor level and two study courses on Master level.

The Faculty is involved in many projects within the Czech Republic, but also co-operates in a lot of international ones. It offers places for foreign students at the Faculty or sending the students either for a kind of study or practical fellowship. The Faculty also organizes courses for foreign students and specialists in restoration and invites lecturers from abroad.

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### 1. INTRODUCTION

The Faculty of Restoration, Litomyšl is located in the Czech Republic, about 140 km south-east of Prague. It belongs to the University of Pardubice, where it is the smallest faculty out of seven faculties of the University of Pardubice. The Faculty of Restoration has only about 100 students, but its importance crosses the boundaries of the region and even of the country, as there are such branches of study that are not offered at any other university in the Czech Republic or within Europe.

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### *1.1. From the Institute of Restoration to the Faculty within University*

The fact that the Faculty of Restoration is situated in Litomyšl is not just a coincidence; the Town of Litomyšl is famous for its renaissance castle which was included in the UNESCO list in 1999; apart from that there are a lot of other places of interest, such as the Baroque Piaristic church or burgher houses on the square. Unfortunately, not all of the buildings were looked after with the greatest care, which was also true about a house called "Portmoneum" with paintings on the walls by Josef Váchal. The house was bought by a private publishing house who called restorers – experts to restore the murals. That was the time when the idea to set up a school of restoration was born as it was clear that there would be many more buildings and other works of art which would require specialists' care. On the other hand, there were not sufficient numbers of restorers capable of dealing with the problems.

Thanks to the support of the Municipal authorities and the National Institute of Conservation, in 1993 the Institute of Restoration, providing further education, could be founded. Later on after a few steps of transformation into a college, it became part of the University of Pardubice as its 7<sup>th</sup> faculty in 2005.

## **2. ORGANIZATIONAL STRUCTURE**

### *2.1 Study courses and fields of studies*

The Faculty offers four study courses on the Bachelor level and two study courses on the Master level. In the Bachelor study courses students can study Restoration and Conservation of **Stone and Related Materials**, Restoration and Conservation of **Wall Painting and Sgraffito**, Restoration and Conservation of **Paper, Bookbinding and Documents**, Restoration and Conservation of **Artworks on Paper and Related Materials**, while in the Master study courses they can gain education in Restoration and Conservation of **Wall Painting, Sculptures and Architectural Surfaces** and Restoration and Conservation of **Works of Written Culture**.

### *2.2 Curriculum*

To become an erudite restorer, the students have to know what historical background the objects come from, so it is essential to be educated in history and art history. At the same time it is vital to have good knowledge of natural sciences to be able to understand the material nature of historical materials and techniques, their main damage phenomena and corrosion mechanisms as well as the scientific basics of nature modern conservation technologies and their impact on works of art. Last but not least they must have artistic skills. Therefore, the concept of education has three main pillars – each of the segments of the education is provided by a different department or studio – the Department of Humanities, the Department of Chemical Technologies and the Studio of Fine Art Training.

All the branches focus on training of the students within their specialization, but at the same time they equip them with other essential skills and knowledge such as History of Art, Philosophy, Aesthetics, History, Restoration documentation seminar, Law in monument care provided by the Department of Humanities, natural science subjects like Chemistry, Laboratory practice, Basics of organic and inorganic binding media, Basics of pigments, Analytical and diagnostic methods in survey of works of art and Conservation technology and artistic training (Drawing course, Nude painting, Anatomy for artists, Photography). All the students are also obliged to study English and Latin for some semesters of their studies and they can add other foreign languages such as German, Italian and Spanish.

### 3. PROJECTS

The Faculty keeps up with the latest trends of modern education, therefore it is involved in many projects within the Czech Republic, but also co-operates in a lot of international ones. The students of the Faculty are always integrated into these scientific projects.

#### 3.1 *EU projects*

##### 3.1.1 *STONECORE*

Outstanding results have been achieved in the European project **STONECORE** – "Stone Conservation for the Refurbishment of Buildings" (2008 – 2011). The main goal of the project was to develop and apply nano-materials for the refurbishment of buildings and the restoration of sculptured artwork. In all cases materials which are compatible with the components originally used during construction are required for refurbishment. This is of essential importance for the consolidation of natural stone such as limestone, marble or sandstone as well as for mortar and plaster. However, the materials and components currently available did not fulfil those demands in all cases.

Six small and medium enterprises, four universities, one public research organization and one governmental organization from seven countries joined together in order to find a new approach for refurbishment of natural and artificial stone. The project, which started in September 2008, progressed from investigations in the laboratory and small scale applications on trial areas, to the use of the materials that had been developed on selected objects in the field.

As a result of the STONECORE programme, several nanomaterial products for stone conservation and restoration have been developed.

STONECORE restoration reference objects by country included:

Poland: Torun, The Tower of St. John's Church

The Czech Republic.: The Church of Santa Barbara, Baroque statue of an angel from Kutna Hora, former convent Rosa Coeli in Dolní Kounice in South Moravia

Greece: The Ancient Theatre of Megalopolis, Fortress Lilaia, The Ancient Theatre of Sikyon

Austria: Marble sculpture from the 18th century, mud bricks from India

Germany: The Church of Hochelten; The Castle of Leuben, The Castle of Dahlen; Xanthen and AachenCathedrals

Recently STONECORE has been accepted as a finalist at the Euro Nano Forum 2013 in the top 11 projects within the 7<sup>th</sup> Framework EU Programme.

##### 3.1.2 *NANOFORART*

The ongoing research international project **NANOFORART** – "Nano-materials for the conservation and preservation of movable and immovable artworks" (2009 – 2014) within the 7<sup>th</sup> Framework EU Programme joins 14 partners with the University of Florence, Italy as the coordinator and is also focused on nanotechnologies. The main objective of the project is the development and experimentation of new nano-materials for the conservation

and preservation of movable and immovable artworks. There are 15 institutions from Italy, Denmark, Spain, Great Britain, Germany, France, Slovenia, Mexico and the Czech Republic involved in the project.

The main challenge of NANOFORART is to combine sophisticated functional materials resulting from the recent developments in nano-science technology with innovative techniques in the restoration and preventive conservation of artworks. The research activity is focused on the development of manageable methodologies, based on nanosized structures and with a low environmental impact.

The second part of the project is also of great importance, as the technology will be handed over to small and medium enterprises that will play a significant role in the standardization of applicative protocols, in the up-scale and commercialization of the technology and in the evaluation of the eco-toxicity of the nano-materials. In the final phase the attention will turn to the end-users – e.g. the National Museum of Anthropology and History of Mexico City and the National Museum of Denmark, whose task will be to validate the technology and the methods developed in the first part of the project, and provide training activities and distribution of the developed techniques.

### *3.1.3 Other EU projects*

Some of other projects are listed together with their descriptions:

**ROCEM** – "Roman Cement to Restore Built Heritage Effectively" (2003 – 2006), whose objective is to re-establish manufacture and use of Roman cements, which were key materials to decorate facades of buildings in the 19<sup>th</sup> and early 20<sup>th</sup> centuries in Europe. Unfortunately, they were no longer available on the market. According to the fundamental principle of modern conservation – that the historic buildings should be repaired with the use of materials that are compatible with the original historic substance – could not be met when restoring this important built heritage. The project included studying historic mortars, selecting appropriate raw materials, optimising cement stone calcinations parameters, carrying out a workshop and conservation trials. Results were to be disseminated to material producers and end-users of the technology – restoration workers and authorities.

**ROCARE** – "Roman Cements for Architectural Restoration to New High Standards" (2009 – 2012) developed the pieces of knowledge gained during the project ROCEM, it was focused on the improvement of the Roman cement technology. The aim was to combine existing knowledge of this historically well established binder with modern aspects of its manufacture, use and marketing.

**NAMO** – "Nabatean Mortars – Technology and Application" (2003 – 2005) was a project in which mortars and building technologies used in the Nabatean period (Nabatean kingdom) in Jordan and Syria were first investigated. There were two reference objects - Temple Qasr al Bint in Petra, Jordan and Great Cathedral in Bosra, Syria. There were four participating countries in the project - Austria, Syria, Jordan and the Czech Republic. After the investigation of historic materials and of the building situation, the project participants concentrated on defining and testing of possible repair materials and finally the results of the project were presented to the public.

### *3.2 Projects within the Czech Republic*

**Low-viscosity inorganic binders and their application** (2011 – 2014) – a project in the collaboration with the Research Institute of Inorganic Chemistry Ltd submitted to the Ministry of Industry and Trade of the Czech Republic. In the period between 2011 and 2014 researchers will be trying to relate the new information concerning the composition and the way of preparation of inorganic binders from the group of so called "geopolymers" to their characteristics in order to achieve such a quality that will enable their application in three different fields – special heat resistant coatings production, production of glues resistant to high temperatures and materials used for historic monuments preservation.

**Study of several conservation procedures for improvement of monument care systems** (2012 – 2015) – a project within the Programme of applied research and development of national and cultural identity funded by the Ministry of Culture of the Czech Republic. The main objective is to create conservation procedures and certified methodology to be able to solve the problems of sculpture and building conservation.

**VEPA – Science for paper artefacts** (2012 – 2015) – an EU and Ministry of Education project – the aim of the project is testing materials and methods for consolidation of paint layer on the paper support. The researchers will focus on the development of already existing knowledge in the field of mechanisms of paint layer degradation on paper support and the impact of individual conservation interventions (disinfection, neutralization etc.) on the stability of paper support with a paint layer.

#### 4. Other activities

##### *4.1 Study stays, fellowships, international co-operation*

Another way how to contribute to the international co-operation is offering places for foreign students at our Faculty or sending our students either for a kind of study or practical fellowship. Our students have been accepted at the Norway National Museum of Photography – Preus Museum in Horten, National Central Library in Florence, Studio Gurtner in Vienna, Dipl. cons. Christian Binder's Studio in Graz, Universidade Nova de Lisboa, University of Arts "George Enescu" Iași, Accademia di Belle Arti G.B. Cignaroli Verona, Hochschule für Bildende Künste Dresden.

Bachelor or Master graduates have been sent to European institutions or restorers' studios for short-term study stays during which they worked on their thesis and solved science-research tasks (Switzerland, Great Britain and Portugal). The Faculty of Restoration has hosted three foreign students in the past two years – from Great Britain, Poland and Japan.

The Faculty also organizes courses for foreign students and specialists in restoration and on the other hand it invites lecturers from abroad (Italy, France and Germany) to teach our students. Just as one example of these activities the regular training courses for restorers of the Republic of Iraq can be mentioned. These courses are currently focused on paper and art work on paper conservation.

##### *4.2 Presentation of the Faculty to the public*

Furthermore, the Faculty contributes to educating general public by organizing seminars and workshops where the participants can learn how to look after the artefacts they own or what processes are involved to preserve them. Just to illustrate there are some topics seminars "How to care for old books and graphics", "Clay as a traditional building material", "How to care for small monuments made of wood" etc.

The Faculty also organizes its own exhibitions and presentations of the individual studios. The Faculty has just celebrated the 20<sup>th</sup> anniversary of the study of restoration in Litomyšl. On the occasion of such an event, an international conference was held. The topic of the conference was "Interdisciplinarity in the Care for Cultural Heritage". Some of the contributions were given by specialist from Austria (Austrian Federal Office for the Care of Monuments, University of applied Arts) and Germany (Dresden Academy of Fine Arts).

## **5. CONCLUSION**

Even if the Faculty of Restoration has currently only about 100 students, it co-operates with the most significant institutions engaged in the cultural heritage preservation, such as the National Institute of Conservation, the National Archive, the National Library of the Czech Republic, the Scientific Library in Olomouc and other institutions. It is an integral part of the University of Pardubice and adds to it in a way which corresponds with the idea everybody should be aware of: the cultural heritage is one of the most precious legacies we have and it is our task to ensure the monuments and artefacts will be preserved for the future generations.

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